ABSTRACT OF THE DISCLOSURE

A method of detecting and suppressing extraneous radiation influences in radiometric measurements utilizes, in addition to the measurement channel that extends at least essentially over the entire usable pulse amplitude spectrum, at least one substitute channel that encompasses only a fractional range of the usable pulse amplitude spectrum. The measurement channel (MK) and substitute channel (EK) are calibrated in terms of the same variables, such as fill level or volume. A comparison between the measurement values, defined by the respective pulse rates of the measurement channel and substitute channel, is brought about in such a way that the value of the linkage varies significantly if extraneous radiation occurs.